

## REMARKS

Claims 2-12 are pending in the application. Claims 2, 4, 7-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sawahashi et al. (Sawahashi) in view of the admitted prior art (AAPA). Claims 3, 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sawahashi in view of the admitted prior art and further in view Shou et al. (Shou).

Included in applicant's claimed invention is a detection unit detecting the code from among candidate codes generated by the code generation unit. The code used for the despreading process as the spreading code of the transmission side. The code detected where the correlation value obtained by the correlation value obtaining unit is a maximum or greater than a reference value.

According to applicant's claimed invention a signal is stored in a memory and the stored signal is retrieved repeatedly for despreading the signal in a repeated manner but with a different spreading code each time. The spreading code among a plurality of candidate spreading codes is utilized in the course of selecting one from these candidate codes.

Thereby the configuration of applicant's claimed invention provides the advantage over the prior art associated with the AAPA unit in the present application, which is concerned with the variance between clocks which gives rise to a synchronization gap between the detection device and the signal. This is describe in applicant's specification pg. 4, line 17 to pg. 5, line 4 and pg. 11, line 9 to pg. 11, line 13. Also the present configuration brings about the possibility of reducing the required despreading time as described below.

Applicant's claimed invention is different from the prior art because "it selects one spreading code out of a plurality of candidate codes". Fig. 1 in the present application specification shows that a signal, "code designation signal" is transmitted from unit 1011 to unit

1006-1, which is a clear disclosure of changes made on the code providing support for the claims.

In addition applicant's claimed invention provides the distinguishing features of the configuration for storing a received signal in a memory, deriving correlations by a sliding correlator using this memorized signal and acquiring a despreading timing.

In a similar manner as the AAPA, Sawahashi does teach or suggest an apparatus or method in which the spreading code sequence is replaced.

Sawahashi describes, "a clock generator for controlling said spreading code sequence replica generator to generate said spreading code sequence, said clock generator changing a phase of said replica of said spreading code sequence when ..." (column 10, claim 1). However there is no description in the specification of Sawahashi indicating that the spreading code sequence is replaced.

Sawahashi describes in the Abstract: when output of the threshold detector is below a threshold, the phase of the spreading code sequence is shifted and detection is repeated.

In contrast applicant claims detecting the code from among candidate codes generated by the code generation unit.

As shown in Fig. 5 and corresponding explanation of Sawahashi essentially when the accumulated value of the product...does not exceed a threshold value, the phase of the spreading code sequence is delayed successively. But Sawahashi does not suggest in the description the feature of applicant's claimed invention, namely changing the spreading code sequence.

In explaining the operation shown in Fig. 7, Sawahashi likewise does not mention anything concerning either using mutually different spreading codes in the correlators operating in parallel or changing the spreading code used in any of the operated correlators.

From the teaching of Sawahashi one skilled in the art would only find a configuration in which the initial phase of a spreading code sequence is variably controlled.

It is respectfully submitted that Sawahashi assumes a spreading code sequence is available to the signal despreading side before the start of despreading process. Sawahashi describes the phase of the spreading code sequence is shifted and detection is repeated until a proper phase is detected.

In contrast applicant claims detecting the code from among candidate codes generated by the code generation unit. As described in the specification of the present application the detection device functions when the spreading code is unknown to the despreading side. Thus the despreading side may find the code and the timing of the signal.

Therefore in applicant's claimed invention as compared to the combination of prior art, assuming a signal is despread using one despreading circuit and that it takes time,  $t$ , to despread the signal with any of the  $n$  different types of spreading codes, the total time required for despreading with all these types of the spreading codes becomes  $n \times t$ .

In the present invention, the signal is stored in an associated memory. A similar length of time,  $t$ , for storing the signal in the memory is required, but once stored in memory, the signal can be retrieved at a high speed as determined by the associated clock speed. Therefore the signal can be despread with each of the  $n$  different types of the spreading codes one after another.

Another advantage is the clock variance arising between those of a base station and a mobile station over the period,  $n \times t$ , in which a signal is despread as it is received. This variance between clocks can cause a complication in matching the timing between the despreading process and the signal. The shorter the period spent for despreading, the smaller the disturbance of this clock variance to the matching need for a detection device configured not to store the

received signal. The present invention is concerned with a configuration, in which, once grasping the timing associated with a received signal, the signal is stored in the memory and the despreading process is performed with respect to the stored signal using each of the  $n$  spreading codes. Thus as result of storing the signal in the memory disturbances due to clock variance with respect to the matching of process timing with that of the signal are reduced.

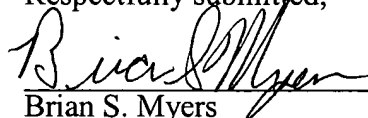
For at least the foregoing reasons it is respectfully requested the rejection as obvious with regard to AAPA and Sawahashi be withdrawn and these claims be allowed.

With regard to claims 3, 5 and 6, Shou fails to teach or suggest the deficiencies of the combination of Sawahashi and AAPA with regard to claim 7. Claims 3, 5 and 6 depend from claim 7 and are likewise in condition for allowance for at least the reasons set forth above and because they each recite additional distinguishing features.

In view of the amendments and remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,

  
\_\_\_\_\_  
Brian S. Myers  
Reg. No. 46,947

**CUSTOMER NUMBER 026304**

Katten Muchin Zavis Rosenman  
575 Madison Avenue  
New York, NY 10022-2585  
(212) 940-8703  
Docket No.: FUJO 16.216(100794-11220)  
BSM:fd